AMENDMENTS TO THE CLAIMS

Claims 1-20. (Canceled)

Claims 21-36. (Canceled)

37. (New) A component mounting apparatus comprising:

a component conveying device, having a suction nozzle capable of exhibiting a holding force for sucking and holding a component to be placed on a circuit-formed member, for conveying said suction nozzle and the component, when sucked and held by said suction nozzle, at a set velocity from a component sucking position where the component is sucked by said suction nozzle to a component placing position where the component is to be placed on the circuit-formed member;

a component recognizing device for recognizing a posture of the component, when sucked and held by said suction nozzle, at a component recognizing position existing along a path through which said suction nozzle is conveyed by said component conveying device from the component sucking position to the component placing position; and

a control device for

(i) determining a deviation of a suction position of the component from a normal suction status of the component on basis of the posture of the component as recognized by said component recognizing device, with the suction position corresponding to a position of the component on said suction nozzle when the component is sucked and held by said suction nozzle, and with the normal suction status corresponding to a reference position of the component on said suction nozzle, and

(ii) based on the deviation as determined by said control device, controlling a velocity at which said component conveying device conveys said suction nozzle and the component from the recognizing position toward the component placing position.

38. (New) The component mounting apparatus according to claim 37, wherein said control device is also for

(iii) on basis of the deviation as determined by said control device, determining a force to be exerted on the component resulting from conveyance of the component by said component conveying device at the set velocity after recognition of the posture of the component by said component recognizing device, which force, if greater than a certain value, would cause the component to deviate from the suction position of the component,

such that said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component from the recognizing position toward the component placing position based on a comparison between the force as determined by said control device and the holding force exhibited by said suction nozzle.

39. (New) The component mounting apparatus according to claim 38, wherein when the deviation as determined by said control device is greater than a threshold value, said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component from the recognizing position toward the component placing position by controlling said component conveying device such that said suction nozzle and the component are conveyed at an reduced velocity from the recognizing position toward the component placing position, with the reduced velocity being less than the set velocity, and with the threshold value corresponding to a magnitude of deviation at which the force as determined by said control device is equal to the certain value and thereby balanced with the holding force exhibited by said suction nozzle.

40. (New) The component mounting apparatus according to claim 39, wherein said control device includes a component information storage section for storing information on properties of the component, with the force to be exerted on the component, resulting from conveyance of the component by said component conveying device at the set velocity, varying in accordance with the properties of the component, and

said control device is also for determining the threshold value based on the information on properties of the component as read from said information storage section.

41. (New) The component mounting apparatus according to claim 40, wherein

said component conveying device has a first nozzle and a second nozzle, with said first and second nozzles being of different types relative to one another, and with said suction nozzle being one of said first and second nozzles, and

said control device includes a nozzle storage section for storing information on a holding force to be exhibited by said first nozzle and a holding force to be exhibited by said second nozzle,

such that said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component, from the recognizing position toward the component placing position, based on a comparison between the force as determined by said control device and a holding force as read from said nozzle storage section.

42. (New) The component mounting apparatus according to claim 39, wherein

said component conveying device has a first nozzle and a second nozzle, with said first and second nozzles being of different types relative to one another, and with said suction nozzle being one of said first and second nozzles, and

said control device includes a nozzle storage section for storing information on a holding force to be exhibited by said first nozzle and a holding force to be exhibited by said second nozzle,

such that said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component, from the recognizing position toward the component placing position, based on a comparison between the force as determined by said control device and a holding force as read from said nozzle storage section.

43. (New) The component mounting apparatus according to claim 38, wherein

said control device includes a component information storage section for storing information on properties of the component, with the force to be exerted on the component, resulting from conveyance of the component by said component conveying device at the set velocity, varying in accordance with the properties of the component, and

said control device is also for determining the certain value based on the information on properties of the component as read from said information storage section.

44. (New) The component mounting apparatus according to claim 43, wherein

said component conveying device has a first nozzle and a second nozzle, with said first and second nozzles being of different types relative to one another, and with said suction nozzle being one of said first and second nozzles, and

said control device includes a nozzle storage section for storing information on a holding force to be exhibited by said first nozzle and a holding force to be exhibited by said second nozzle,

such that said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component, from the recognizing position toward the component placing position, based on a comparison between the force as determined by said control device and a holding force as read from said nozzle storage section.

45. (New) The component mounting apparatus according to claim 38, wherein

said component conveying device has a first nozzle and a second nozzle, with said first and second nozzles being of different types relative to one another, and with said suction nozzle being one of said first and second nozzles, and

said control device includes a nozzle storage section for storing information on a holding force to be exhibited by said first nozzle and a holding force to be exhibited by said second nozzle,

such that said control device is for controlling the velocity at which said component conveying device conveys said suction nozzle and the component, from the recognizing position toward the component placing position, based on a comparison between the force as determined by said control device and a holding force as read from said nozzle storage section.

46. (New) The component mounting apparatus according to claim 37, wherein

said control device is for controlling a velocity at which said component conveying device conveys said suction nozzle and the component from the recognizing position toward the component placing position by controlling said component conveying device such that said suction nozzle and the component are conveyed at an reduced velocity from the recognizing position toward the component placing position, with the reduced velocity being less than the set velocity.

47. (New) A component mounting method comprising:

causing a suction nozzle to apply a holding force to a component such that said component is sucked and held by said suction nozzle;

recognizing a posture of said component when sucked and held by said suction nozzle;

determining a deviation of a suction position of said component from a normal suction status of said component on basis of the recognized posture of said component, with said suction position corresponding to a position of said component on said suction nozzle when said component is sucked and held by said suction nozzle, and with said normal suction status corresponding to a reference position of said component on said suction nozzle;

based on the determined deviation, controlling a velocity at which said suction nozzle and said component are conveyed to a component placing position; and

at said component placing position, placing said component on a circuit-formed member.

48. (New) The method according to claim 47, further comprising:

on basis of the determined deviation, determining a force that would be exerted on said component were said component conveyed at a set velocity after the recognition of said posture of said component, which force, if greater than a certain value, would cause said component to deviate from said suction position of said component,

such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity based on a comparison between the determined force and the applied holding force.

49. (New) The method according to claim 48, wherein

when the determined deviation is greater than a threshold value, controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises conveying said suction nozzle and said component at a reduced velocity, with said reduced velocity being less than said set velocity, and with said threshold value corresponding to a magnitude of deviation at which the determined force is equal to said certain value and thereby balanced with the applied holding force.

50. (New) The method according to claim 49, wherein

said threshold value varies in accordance with properties of said component, such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity in accordance with the properties of said component.

51. (New) The method according to claim 50, wherein

said suction nozzle is one of a first nozzle and second nozzle, with said first and second nozzles being of different types relative to one another, with said first nozzle being capable of applying a first holding force, and with said second nozzle being capable of applying a second holding force that is different from said first holding force,

such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity based on a comparison between the determined force and a corresponding one of said first and second holding forces.

52. (New) The method according to claim 49, wherein

said suction nozzle is one of a first nozzle and second nozzle, with said first and second nozzles being of different types relative to one another, with said first nozzle being capable of applying a first holding force, and with said second nozzle being capable of applying a second holding force that is different from said first holding force,

such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity based on a comparison between the determined force and a corresponding one of said first and second holding forces.

53. (New) The method according to claim 48, wherein

said certain value varies in accordance with properties of said component, such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity in accordance with the properties of said component.

54. (New) The method according to claim 53, wherein

said suction nozzle is one of a first nozzle and second nozzle, with said first and second nozzles being of different types relative to one another, with said first nozzle being capable of applying a first holding force, and with said second nozzle being capable of applying a second holding force that is different from said first holding force,

such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity based on a

comparison between the determined force and a corresponding one of said first and second holding forces.

55. (New) The method according to claim 48, wherein

said suction nozzle is one of a first nozzle and second nozzle, with said first and second nozzles being of different types relative to one another, with said first nozzle being capable of applying a first holding force, and with said second nozzle being capable of applying a second holding force that is different from said first holding force,

such that controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises controlling said velocity based on a comparison between the determined force and a corresponding one of said first and second holding forces.

56. (New) The method according to claim 47, wherein recognizing said posture of said component when sucked and held by said suction nozzle comprises recognizing said posture at a component recognizing position, and further comprising:

after causing said suction nozzle to apply said holding force to said component such that said component is sucked and held by said suction nozzle, conveying said suction nozzle and said component at a set velocity to said component recognizing position,

wherein controlling said velocity at which said suction nozzle and said component are conveyed to said component placing position comprises conveying said suction nozzle and said component at a reduced velocity, with said reduced velocity being less than said set velocity.